

WHAT IS CLAIMED IS:**1. Liquid discharge apparatus, comprising:**

a portable liquid applicator unit including housing having a handle at one end configured for convenient grasping by a user, a nozzle at the opposite end for discharging liquid from a discharge opening therein, and a manipulable member manually actuatable to produce a discharge of liquid from said nozzle;

said nozzle including a gas passageway communicating with said discharge opening, and a liquid passageway communicating with said gas passageway;

a gas delivery system actuatable by said manipulable member to discharge gas at high-velocity through said discharge opening in said nozzle via said gas passageway therein;

and a liquid source communicating with said liquid passageway in the nozzle such that each high-velocity discharge of gas from said nozzle via said gas passageway draws a quantity of liquid from said liquid source into said gas passageway and discharges same at high-velocity with said gas through said discharge opening.

2. The apparatus according to Claim 1, wherein said gas delivery system includes a reservoir within said housing defining a predetermined volume of pressurized gas, and a control device actuatable by said manipulable member to deliver from the reservoir said predetermined volume of pressurized gas, in the form of a high-velocity pulse, to said gas passageway in the nozzle and to discharge same, with the quantity of liquid drawn therein, through said discharge opening.

3. The apparatus according to Claim 2, wherein said gas delivery system further includes an external source of pressurized gas externally of said housing and connected to said reservoir within said housing for supplying pressurized gas thereto.

4. The apparatus according to Claim 3, wherein said gas delivery system further includes a quick-exhaust valve having a valve inlet communicating with said gas reservoir and a valve outlet controlled by a control member, said control member being actuatable to a first position closing said valve outlet to permit the reservoir to be pressurized with gas from said external source, and to a second position opening said

valve outlet to discharge a gas pulse at high-velocity therethrough and through said discharge opening in the nozzle via said gas passageway in the nozzle.

5. The apparatus according to Claim 4, wherein said control member is moved to said first position by pressurized gas from said external source, and to said second position by an interruption in the pressure of the pressurized gas from said external source.

6. The apparatus according to Claim 5, wherein said external source of pressurized gas is continuously connected to said reservoir by a one-way valve permitting gas flow into the reservoir.

7. The apparatus according to Claim 1, wherein said gas passageway in the nozzle is reduced in cross-section for a portion of its length, said liquid passageway in the nozzle communicating with said gas passageway at the portion thereof of reduced cross-section to thereby increase, by the Venturi effect, the quantity of liquid drawn into the gas and discharged therewith through said discharge opening.

8. The apparatus according to Claim 1, wherein said liquid source includes a container for the liquid external to said housing and connected thereto by an external liquid tube.

9. The apparatus according to Claim 8, wherein said housing includes an internal liquid conduit communicating at one end with said external liquid tube and at the opposite end with said liquid passageway in the nozzle.

10. The apparatus according to Claim 9, wherein said liquid container is also connected to said gas delivery system such as to be pressurized by the gas thereof for feeding liquid therefrom to said internal liquid conduit.

11. The apparatus according to Claim 10, wherein said internal liquid conduit includes a flow regulator for regulating the liquid flow therethrough.

12. The apparatus according to Claim 8, wherein said liquid container includes a mixer for mixing the liquid therein.

13. The apparatus according to Claim 1, wherein said gas delivery system is designed to deliver compressed air to said nozzle, and said liquid source is designed to deliver a plant anti-virus inoculation liquid to said nozzle to be discharged at high-velocity with said compressed air through said discharge opening.

14. The apparatus according to Claim 1, wherein said manipulable member is an electrical switch carried by said handle and electrically controlling a valve in said gas delivery system.

15. Liquid discharge apparatus, comprising:

a housing including a nozzle having a discharge opening, a gas passageway communicating with said discharge opening, and a liquid passageway communicating with said gas passageway;

a gas delivery system including a reservoir within said housing defining a predetermined volume of pressured gas, and a control device actuatable to deliver from the reservoir said predetermined volume of pressurized gas in the form of a high-velocity pulse to said gas passageway in the nozzle for discharge through said discharge opening therein;

and a liquid source communicating with said liquid passageway in the nozzle such that each high-velocity discharge of gas from said nozzle via said gas passageway draws a quantity of liquid from said liquid source and discharges same at high-velocity with said gas through said discharge opening.

16. The apparatus according to Claim 15, wherein said gas delivery system further includes a quick-exhaust valve having a valve inlet communicating with said gas reservoir, and a valve outlet controlled by a control member; said control member being actuatable to a first position closing said valve outlet to permit the reservoir to be pressurized with gas from said external source, and to a second position opening said valve outlet to discharge a gas pulse at high-velocity therethrough and through said discharge opening in the nozzle via said gas passageway in the nozzle.

17. The apparatus according to Claim 16, wherein said valve member is moved to said first position by pressurized gas from said external source, and to said second position by an interruption in the pressure of the pressurized gas from said external source.

18. The apparatus according to Claim 16, wherein said gas delivery system further includes a one-way valve effective to pass pressurized gas from said external source to said gas reservoir.

19. The apparatus according to Claim 15, wherein said gas passageway in the nozzle is reduced in cross-section for a portion of its length, said liquid passageway in the nozzle communicating with said gas passageway at the portion thereof of reduced cross-section to thereby increase, by the Venturi effect, the quantity of liquid drawn into the gas and discharged therewith through said discharge opening.

20. The apparatus according to Claim 15, wherein said gas delivery system is designed to deliver compressed air to said nozzle, and said liquid source is designed to deliver a plant anti-virus inoculation liquid to said nozzle to be discharged at high-velocity with said compressed air through said discharge opening.